

Remarks

The Examiner's comments and objections and the cited references have been carefully considered by the Applicant.

Rejections under 35 U.S.C. 112

The claims are amended to clarify that the layers forming the multilayer material are made of the polyester resin and to render the language regarding the foldability characteristics of the creased pattern conforming to the disclosure of the specification. The beverage-tight property of the containers is disclosed on page 4, lines 22-24 of the original specification.

With the above amendments the rejections under 35 U.S.C. 112 first and second paragraph are considered to be overcome and withdrawal thereof is solicited.

Rejections under 35 U.S.C. 103(a)

It is noted that the Examiner assumes that it would have been obvious for the skilled person at the time the invention was made to replace the paperboard core of the multilayer structure of Martin Jr. with a foamed polyester sheet and to eliminate from said structure the layer of polyolefinic material which render the material of Martin Jr. not recyclable.

It is also noted that the Examiner assumes that it would also have been obvious for the skilled person at the time the invention was made to substitute the dual-surface polyester film of Martin Jr. with a film of a polyester having a melting point from 50 to 200°C, since it was known at the time of the invention that the film had heat-sealing characteristics.

The problem solved by the claimed invention is to provide a recyclable, heat sealable material suitable for the production by folding of beverage-tight containers.

The solution to this problem offered by the claimed invention is a multilayer polyester material comprising a layer a foamed material to which a low melting point polyester film is adhered.

It should be noted that at the time the invention was made the skilled person knew:

- that the structure of Martin Jr. contains *as essential component* a polyolefinic layer, which is not recyclable, and that this component cannot be eliminated without departing from the teaching of Martin Jr. which considers the polyolefinic layer an essential structural component which has

- become the standard in the industry of the sector and which is desirable to utilize in paperboard laminates whenever possible;
- that the polyethylene layer is present in all the multilayer structure disclosed by the prior art relied upon by the Examiner (the structure disclosed by Joosten is representative);
 - that creasing of foamed polyester sheets produces breaks which prevent the use of the sheets for manufacturing beverage-tight containers.

From the above it clearly appears that neither suggestion nor motivation to offer the claimed solution to the proposed problem could have been found by the person skilled in the art at the time the invention was made, either in the cited references or in the knowledge generally available to one ordinary skilled in the art.

In fact, the solution provided by the claimed multilayer material of adhering a film of a low melting point polyester to the foamed sheet in order to avoid breakage when folding the material (see Declaration of Dr. Giovannini) was unforeseeable at the time of the invention and the obtained results, as beverage-tight, heat sealable and recyclable containers, were totally unexpected.

In this sense it should be noted that the knowledge of Ochii et al. use of a creased foamed polyester to obtain containers for hot-melts was not helpful because the breaks which certainly are present in the foamed PET sheet used by Ochii et al are of no weight for the use described by Ochii et al. whereas they are inadmissible for beverage-tight containers.

Moreover, it is noted that the Examiner mentions Joosten as teaching the preparation of recyclable containers. However, it should be noted that the containers of Joosten which comprises several layers made of different polymeric materials can have any property except the recyclability. It is further noted that the Hayashi is cited by the Examiner to show that it would have been obvious for one ordinary skilled in the art to provide the material with a foamed polyester sheet having a density of less than 700 kg/m³ in order to maintain good heat-insulating properties. However, the heat-insulating properties are not mentioned anywhere in the specification. The main reason for using a foamed polyester core layer is the low weight properties of the multilayer material and not the heat-insulating properties.

Finally, the remedy to the deficiency of Martin Jr. of failing to disclose a heat sealable film having a melting point from 50 to 200°C, is plucking the feature out of the Encyclopedia of Polymer Science and Engineering (Vol. 12, page 214, 1985).

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From the foregoing it results that neither of the five cited references disclose or suggest the claimed invention, nor is any of them of relevance thereto.

In light of the above it is respectfully submitted that the only way the five cited references relied upon by the Examiner can be combined to arrive at the claimed invention is by making a hindsight reconstruction. The approach used in the Office Action of combining five references while using the claimed invention as a blue print and plucking features out of each of the five references to arrive to the presently claimed invention the essence of hindsight reconstruction.

Considering such hindsight reconstruction to be improper is consecrated (see *Ecolchem Inc. V. Southern California Edison*, 56 USPQ 2d 1065, 1072 - 1076, Fed. Cir. 2000).

It is accordingly respectfully submitted that the cited references not only fail to disclose or suggest the claimed invention, but also the combination thereof so as to result in the claimed invention is improper.

In view of the foregoing, favorable action on the merits, including entry and approval of all amendments, reconsideration and withdrawal of all rejections and allowance of all claims is respectfully solicited.

Respectfully submitted,



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